n. of here, near Lyons, and about 2.45 p. m., when about two miles s. of Philips' Corners, it came to the ground. Its course was a little s. of e. As it descended it unroofed the house of J. Stahl, on the west side of the road. A large piece of the roof was thrown about ten rods to the southeast, and other parts to the northeast. It next struck the barn of O. P. Barnes, which stood just at the south edge of the storm-track, and took the roof from one side. The house (made of plank) stood a little north of the centre of the track, and the whole upper part was taken up and ground to pieces. The north wall was left and the south wall taken to the floor. Mr. Barnes was jerked up by the wind and carried about five rods, passing over an apple tree, and, when he dropped, an apple tree fell on him. He was not seriously injured. A boy who was in the yard was thrown under a sled on which, almost instantly afterward, the corn-crib was dashed. The boy was but little hurt. A straw-covered shed was not touched, while a chicken house near by was totally destroyed, many of the chickens being killed. Mrs. Barnes, who was in the house, was struck on the head and breast, and is badly injured. When the storm had passed, she was found in the yard unconscious. A boy who was lying on a lounge in the house, was rolled off on the floor, and the quilt taken, which was found over half a mile to the east. Some of the goods were carried nearly three miles away. After passing the house it struck the orchard, which it nearly destroyed, the trees being broken off, or taken out by the roots. The track of the storm is only about twenty rods long by ten rods wide. It was not over half a minute from the time it first appeared till it was gone. It is described as a big blue ball, and roared louder than a train of cars.

Just after the tornado passed it rained very heavy, with a little hail. It hailed very heavy in all directions around. Some places the hail was three inches deep, and on the west side of the buildings there were chunks of ice weighing ten pounds forty-eight hours after the storm. The hail extended over a tract eight to ten miles wide by fifteen to twenty long. Some places crops were nearly ruined.

Washington, Washington county, Pennsylvania: this county was visited on the morning of the 25th by an unusually heavy thunder-storm and destructive rain. Hail fell in various parts of the county at different times during the day. A large number of telegraph poles were struck by lightning, interrupting communication with Wheeling, West Virginia. A tank-house of the Union Oil Company was struck and burned, together with five hundred barrels of oil. Reports from the surrounding country state that considerable damage was done by the heavy rain; meadows were flooded and bridges carried away by the high waters. All trains were delayed by land slides.

Newark, Licking county, Ohio: a destructive storm, accompanied by hail, visited this place on the 25th. Trees, fences, and out-buildings were blown down. During the storm the store-houses of the glass works were struck by lightning, and the buildings, together with their contents, consisting of a large amount of glassware, were burned.

Lancaster, Fairfield county, Ohio: a severe thunder-storm visited this place on the 25th, unroofing buildings, destroying trees, and doing much damage to the fruit, tobacco, and wheat crops.

NAVIGATION.

FLOODS.

Albuquerque, New Mexico: owing to heavy rains and melting snow in the mountains, the Rio Grande River was higher on the 2d than it has been since 1883. The towns of Chamberino, Launcen, and Nobre de Dios were completely overflowed and the inhabitants compelled to seek the hills for safety. At the Mexican town of Paso del Norte a very substantial bridge across the Rio Grande was considerably weakened, the embankments on both sides being washed away.

El Paso, Texas: on the 7th the Rio Grande River was ten feet above the low-water mark and remained stationary until the 10th, when it commenced falling slowly and at the end of the month was still four feet above the low-water mark at El Paso. Between the 7th and 10th railroad tracks were washed away in many places, several bridges destroyed, and three towns in the Mesilla Valley overflowed, the inhabitants being obliged to remove to the hills. Crops, stock, and a number of houses were washed away. Fort Hancock was submerged and abandoned by the garrison, the buildings having been undermined by the water.

Asheville, Buncombe county, North Carolina: on the night of the 8–9th a phenomenally heavy rain storm occurred in the vicinity of Marshall, in Madison county. A small mountain stream known as Rigsley's Run, which generally is only three or four feet wide, was suddenly converted into a destructive torrent. A railroad and turnpike on the margin of the stream were completely washed away in places, leaving gulleys where the road bed had formerly been; timber, houses, and large boulders were thrown upon the remainder of the track, delaying trains for several days. In the valley below considerable farm property was destroyed, crops being submerged, cattle drowned, and fences and small buildings carried away. This sudden rise of the stream is attributed by the inhabitants of this section to a waterspout which is reported to have formed a short distance north of Marshall.

Omaha, Nebraska: on the night of the 14–15th, about midnight, an exceedingly heavy fall of rain, which is described as a "cloud-burst," occurred at Osceola, Polk county. Nearly two miles of the Omaha and Republican Valley Railroad track were washed away, together with several buildings, horses, and wagons.

Cairo, Illinois: very heavy rain fell on the 16th, several washouts occurred on the Iron Mountain, and Texas and Saint Louis Railroads, delaying traffic for some time. Crops, also, were considerably damaged by the rain.

Alexandria, Rapides county, Louisiana: the rainfall of the twenty-four hours ending at 5 p. m. of the 16th was phenomenally large in this county, 21.40 inches falling at this place, and 13.20 inches at Cheneyville, a few miles southeast. Bad washouts occurred on the New Orleans division of the Texas Pacific Railroad, causing a suspension of traffic for several days. All that portion of the town extending from Third to Tenth streets, and from Madison street to the Morgan depot, was entirely submerged to the depth of three feet. Two men were drowned by the overflow.

Pittsburg, Pennsylvania: very heavy rain occurred during the night of the 16–17th, flooding several stores and dwellings in this city.

Nashville, Tennessee: reports from different sections of Tennessee indicate that great damage was done by heavy rains which fell from the 17th to 23d. Streams were overoverflowed and cut wheat carried away. Much wheat was also ruined by germinating in the shocks.

Lynchburg, Virginia, 23d: the crops in the surrounding country have been greatly injured by the heavy rains of the preceding week. The storm of the 21st did considerable damage; entire fields of grain were submerged with mud and water and rendered useless; gardens were also badly damaged. On the afternoon of the 23d a land slide occurred on the Virginia Midland Railroad track, covering it with a mass of earth, rocks, and trees.

Dale Enterprise, Rockingham county, Virginia: very heavy rain fell on the afternoon of the 24th, causing streams to rise rapidly. Cook's Creek was higher than has been known for many years, and all the lowlands suffered much from overflow.

Warrenton, Warren county, Missouri: on the 26th an unusually heavy rain fell, causing the creeks in the southern part of the county to rise higher than ever before known. Thousands of dollars worth of wheat and corn were carried away and destroyed.

The following is an extract from the Opelousas, Louisiana, "Courier," of June 26, 1886:

> The water in bayous Cocodrie, Boeuf, and Courtableau is higher than it has been for years, and at Washington on Wednesday last was only twenty-six inches below the high-water mark of 1882. Most of the farms on the west bank of the Bayou Boeuf are under water. This almost unprecedented overflow is caused by the heavy rains of the past two weeks, whereas the inundation of 1882 was from the breaking of levees on the Red and Mississippi rivers.

Milledgeville, Georgia: the heavy rain of the 28th, 29th, and 30th caused freshets in all rivers and creeks in this part of the state. Plantations on the river bottoms suffered heavily by the overflow, large areas of cotton and corn were submerged. The Chattahoochee branch of the Savannah, Florida, and Western Railroad sustained great damage, several bridges being destroyed and considerable track undermined.

Table of miscellaneous meteorological data for June, 1886—Signal Service observations.

Stations.	Elevation above sea-level.	Atmospheric pressure (in inches and hundredths): Mean actual barometer.	Departure from normal.	Mean reduced barometer.	Extremes: Highest barometer.	Date.	Lowest barometer.	Date.	Monthly range of barometer.	Temperature of the air (in degrees Fahrenheit): Monthly mean.	Departure from normal.	Extremes: Max.	Date.	Mean max.	Min.	Date.	Mean min.	Monthly range.	Daily ranges: Greatest.	Date.	Least.	Date.	Mean rel. humidity.	Mean dew-point.	Precipitation.	Departure from normal.	Winds: Total movement.	Prevailing direction.	Maximum velocity: Miles p. h.	Direction.	Date.	No. of rainy days.	No. of cloudy days.	No. of fair days.	No. of clear days.
New England.																																			
Eastport	61	29.86	+.02	29.93	30.24	21	29.38	18	0.86	54.9	−0.4	75.9	18	64.8	41.3	7	47.0	34.6	28.8	22	9.4	13	78.6	47.5	0.66	−3.48	3,874	s.	25	nw.	8	8	3	18	9
Portland	99	29.84	+.03	29.94	30.26	21	29.34	17	0.92	60.8	−3.5	82.1	29	68.6	47.0	20	52.7	35.1	27.4	20	3.1	24	76.5	52.5	1.66	−1.86	5,123	s.	22	s.	5	11	10	11	9
Mount Washington	6,279	23.81		29.93	30.27	21	29.46	18	0.81	42.2	−1.6	58.2	22	49.3	24.1	19	35.8	34.1	29.1	20	4.5	25	89.9	39.2	6.09	+3.48	19,895	nw.	94	nw.	18	17	3	20	7
Boston	125	29.83	+.01	29.90	30.27	21	29.44	17	0.83	63.1	−3.1	81.7	29	70.8	50.1	6	55.7	31.6	25.4	29	2.3	24	70.6	52.1	1.34	−2.31	7,206	w.	27	w.	26	12	9	12	9
Block Island	27	29.95		29.97	30.30	21	29.48	17	0.82	61.3	−1.2	74.1	27	67.2	47.6	6	56.3	26.5	19.3	11	3.2	14	88.8	57.8	2.15	−2.21	6,925	sw.	31	sw.	3	9	6	16	8
Narragansett Pier										62.6		80.0	20	71.3	43.0	6	54.0	37.0							1.77	−0.82					12				
New Haven	107	29.87		29.97	30.29	21	29.48	17	0.82	63.1	−4.4	80.5	29	72.0	46.4	6	54.4	34.1	26.3	20	5.3	13	74.1	53.7	2.84	−0.37	4,163	s.	18	nw.	18	10	6	15	9
New London	47	29.95	+.02	29.99	30.31	21	29.51	17	0.80	63.1	−2.6	77.7	27	70.0	46.7	6	55.8	31.0	23.7	20	3.5	13	77.9	55.5	2.14	−1.33	4,004	sw.	22	se.	23	10	10	16	4
Mid. Atlantic States.																																			
Albany	83	29.90	+.03	29.98	30.29	21	29.46	17	0.83	65.8	−2.7	83.0	29	75.3	49.3	9	56.5	33.7	30.0	20	5.0	14	65.0	52.4	3.19	−0.71	4,426	s.	24	s.	2	9	10	12	8
New York City	168	29.82	+.01	29.98	30.30	21	29.50	17	0.80	65.6	−3.0	83.0	11	73.8	53.0	4	58.7	30.0	21.7	29	4.4	23	77.7	57.7	3.01	−0.27	5,219	s.	26	ne.	14	9	8	12	10
Philadelphia*	117	29.87	.00	29.98	30.30	21	29.52	17	0.77	68.6	−2.7	86.0	13	78.5	53.6	4	60.5	32.4	25.2	13	8.4	22	73.1	58.6	2.86	−0.52	5,924	s.	26	e.	26	8	9	11	9
Atlantic City	13	29.95	−.02	29.95	30.29	21	29.48	17	0.81	65.7	−1.1	82.0	27	71.9	50.3	7	58.8	31.7	26.7	20	4.7	14	83.1	60.1	2.56	−0.61	5,643	se.	35	se.	23	10	6	19	5
Sandy Hook	28	29.94	−.01	29.90	30.30	21	29.51	17	0.80	64.9	−3.6	82.0	11	73.2	52.9	4	58.7	29.1	22.0	29	5.4	14	82.2	58.8	4.00	−0.11	9,339	e.	40	e.	23	13	6	11	13
Cape Henlopen																																			
Baltimore	45	29.94	−.02	29.96	30.27	21	29.56	17	0.71	69.9	−4.0	89.0	17	78.1	51.8	5	62.6	37.2	23.1	13	8.1	22	71.1	59.1	5.64	+1.64	3,802	se.	18	nw.	26	13	7	16	7
Ocean City																																			
Washington City	106	29.87	−.03	29.97	30.29	21	29.61	17	0.68	69.9	−3.6	88.8	17	78.2	50.2	5	61.9	38.6	24.7	5	8.7	22	83.2	64.2	6.75	+2.40	3,701	s.	19	nw.	17	11	7	17	6
Cape Henry	16	29.97	−.02	29.97	30.25	21	29.62	17	0.64	70.1	−3.2	93.8	17	75.4	57.8	1	64.7	36.0	22.3	17	4.6	19	81.7	63.9	4.23	+0.59	8,329	ne.	34	n.	1	17	11	11	8
Chincoteague	8	29.98	−.03	29.97	30.28	21	29.57	17	0.71	68.0	−0.6	83.5	25	74.6	55.6	5	63.1	27.9	16.4	23	5.0	22	84.3	63.7	2.47	+0.11	6,542	se.	32	ne.	19	15	9	14	7
Lynchburg	652	29.30	−.02	29.96	30.22	20	29.64	17	0.58	70.5	−3.9	88.3	13	79.6	52.4	5	62.7	35.9	24.7	1	8.1	22	84.2	65.0	8.48	+5.03	2,418	ne.	16	nw.	23	18	14	13	3
Norfolk	30	29.96	−.01	29.97	30.25	21	29.62	17	0.64	71.3	−4.2	93.2	17	79.4	56.5	20	64.8	36.7	23.9	3	5.5	1	78.4	63.5	5.34	+1.09	3,634	e.	20	se.	22	17	11	13	6
South Atlantic States.																																			
Charlotte	808	29.16	−.02	29.96	30.17	20	29.70	17	0.46	72.1	−3.7	89.7	13	81.5	56.6	5	63.5	33.1	25.9	26	9.0	6	83.9	66.4	11.04	+6.93	3,272	sw.	24	e.	21	18	14	11	5
Fort Macon	11	29.98	−.07	29.96	30.17	21	29.73	17	0.45	75.2	+0.3	83.9	26	79.6	60.4	20	70.4	23.5	13.8	18	4.2	10	87.4	71.2	6.52	+1.01	11,401	sw.	47	ne.	30	12	10	13	7
Hatteras	12	29.98	−.02	29.98	30.23	21	29.73	18	0.50	73.5	−0.5	84.0	26	78.8	60.0	4	68.0	24.0	17.0	18	7.0	5	82.2	67.6	5.51	+0.81	7,124	ne.	26	se.	22	16	10	11	9
Kitty Hawk	9	29.99	−.04	29.98	30.35	21	29.69	17	0.66	70.9	−2.2	90.3	17	76.4	55.1	1	66.4	35.2	21.3	3	4.1	5	82.8	65.2	8.95	+4.30	10,179	ne.	40	ne.	19	13	9	14	7
New River Inlet																																			
Smithville	34	29.95	−.05	29.96	30.16	20	29.72	18	0.44	76.0	−0.8	86.6	17	81.4	59.0	20	69.2	27.6	17.8	18	6.9	21	84.2	70.7	3.68	+0.40	8,232	sw.	36	se.	22	15	7	16	7
Wash Woods										76.7		91.0	17	84.1	64.0	1	69.3	27.0							8.91						12				
Wilmington	52	29.94	−.03	29.97	30.19	20	29.73	16	0.46	75.3	−1.3	92.2	11	83.6	56.3	20	67.8	35.9	25.9	11	6.6	9	80.4	68.2	8.81	+2.60	4,776	sw.	24	w.	30	16	12	13	5
Charleston	52	29.94	−.03	29.96	30.14	20	29.74	16	0.40	77.3	−2.2	89.5	17	83.6	66.7	2	71.5	22.8	20.6	25	5.3	20	79.7	70.3	10.78	+5.45	5,869	e.	44	e.	21	15	15	12	3
Augusta	183	29.81	−.05	29.96	30.12	20	29.73	17	0.39	75.4	−3.3	94.4	12	86.6	62.5	5	67.9	31.9	27.7	26	7.9	6	79.5	67.7	9.65	+5.59	2,502	ne.	24	ne.	21	17	14	11	5
Savannah	87	29.90	−.05	29.96	30.11	26	29.79	17	0.32	79.8	−0.2	93.2	17	86.2	66.5	5	73.2	26.7	22.0	27	5.5	19	79.3	72.4	7.24	+0.24	5,071	s.	28	se.	21	17	9	17	4
Jacksonville	43	29.95	−.05	29.96	30.14	26	29.79	21	0.35	80.7	+0.2	94.3	28	88.6	66.9	2	73.9	27.4	21.0	3	7.8	23	77.1	72.5	4.78	−0.97	4,675	se.	36	s.	29	16	5	22	3
Florida Peninsula.																																			
Cedar Keys	22	29.97	−.05	29.95	30.15	26	29.70	21	0.45	80.4	−0.4	90.1	13	86.2	66.4	21	74.4	23.7	17.4	21	6.1	24	80.7	73.6	7.81	+0.86	6,752	w.	68	e.	20	12	13	14	3
Key West	20	29.96	−.07	29.93	30.10	25	29.81	10	0.29	84.7	+1.5	99.8	25	92.5	73.6	12	78.3	26.2	24.3	12	5.0	1	74.9	75.5	2.51	−1.55	7,433	se.	40	s.	20	16	11	13	6
Sanford	25	29.94		29.93	30.11	26	29.80	10	0.30	79.3	+0.7	94.7	11	89.2	65.0	3	71.3	29.7	25.7	29	12.3	25	80.6	72.1	11.08	+3.07	3,894	e.	28	s.	29	18	3	18	9
Eastern Gulf States.																																			
Atlanta	1,129	28.84	−.05	29.97	30.14	26	29.71	21	0.43	72.3	−3.2	89.7	12	80.8	60.0	5	66.3	29.7	20.5	11	6.0	5	79.6	64.9	8.68	+4.35	5,884	e.	32	s.	23	21	12	12	6
Pensacola	30	29.92	−.08	29.91	30.13	26	29.76	21	0.37	80.4	+0.5	92.8	3	87.5	69.2	22	74.9	23.6	17.9	19	5.8	16	78.4	72.7	7.67	+2.32	5,274	s.	25	s.	29	14	5	17	8
Mobile	35	29.92	−.07	29.92	30.12	26	29.80	20	0.32	77.9	−2.7	93.6	2	86.3	65.4	19	71.8	28.2	23.8	19	8.2	16	82.6	71.7	5.94	+0.42	4,896	se.	22	se.	16	20	5	18	7
Montgomery	219	29.73	−.06	29.92	30.11	26	29.74	21	0.37	77.5	−1.0	95.0	12	87.8	63.9	22	70.5	31.1	23.0	3	6.8	20	79.4	69.8	8.61	+3.87	3,459	se.	32	w.	17	16	15	11	4
Vicksburg	222	29.71	−.08	29.91	30.08	26	29.62	16	0.46	76.4	−3.6	93.1	26	85.9	65.8	20	69.8	27.3	25.1	2	6.8	15	81.0	69.5	9.63	+5.89	4,186	se.	24	se.	12	18	7	18	5
New Orleans	52	29.88	−.07	29.90	30.08	26	29.74	15	0.34	78.7	−2.4	92.0	3	87.3	70.0	8	73.2	22.0	19.8	1	9.5	12	81.6	72.1	9.30	+3.27	3,839	se.	24	se.	13	21	7	16	7
Western Gulf States.																																			
Shreveport	227	29.68	−.08	29.88	30.06	4	29.57	15	0.49	78.7	−1.9	100.7	1	91.1	63.9	4	71.0	36.8	32.0	25	10.0	15	74.6	69.0	4.16	+0.76	4,281	se.	21	n.	15	13	8	16	6
Fort Smith	470	29.45	−.01	29.91	30.16	3	29.65	15	0.51	73.8	−2.6	98.9	1	84.2	59.2	25	66.4	39.7	28.6	25	5.0	13	85.3	68.4	6.09	+2.71	2,649	e.	49	s.	19	13	10	14	6
Little Rock	299	29.61	−.05	29.88	30.10	3	29.64	16	0.46	74.5	−3.5	95.2	1	83.5	60.2	5	67.6	35.0	26.2	25	6.9	15	86.6	69.8	9.28	+5.98	3,630	e.	24	nw.	2	16	12	12	6
Galveston	40	29.88	−.08	29.88	30.05	3	29.47	14	0.58	80.3	−2.3	90.0	29	85.8	67.2	6	75.2	22.8	16.6	17	7.4	12	79.7	73.2	6.19	+2.00	6,822	s.	50	ne.	14	10	4	17	9
Indianola	26	29.87	−.08	29.86	30.03	4	29.63	14	0.40	80.8	−1.2	93.6	16	89.0	67.1	7	75.7	26.5	18.7	23	5.6	13	79.7	73.4	2.97	+0.41	8,029	s.	49	ne.	29	10	2	20	8
Palestine	533	29.38	−.08	29.89	30.07	3	29.66	14	0.40	77.9	−0.7	96.7	16	88.7	65.0	21	70.4	31.7	26.8	25	8.9	6	73.6	67.8	2.37	−6.07	5,492	s.	48	nw.	16	9	5	15	10
San Antonio	781	29.10	−.05	29.85	30.02	4	29.65	15	0.37	78.8	−3.1	100.6	19	91.2	62.7	24	69.2	37.9	29.6	24	11.1	3	72.8	68.0	3.52	+1.56	4,546	se.	34	ne.	27	9	9	12	9
Rio Grande Valley.																																			
Brownsville	57	29.84	−.04	29.85	30.01	3	29.66	13	0.34	80.0	−2.8	94.4	18	89.7	67.5	8	73.0	26.9	21.9	24	9.9	5	86.0	74.9	7.78	+6.06	4,102	s.	20	sw.	3	10	4	14	12
Rio Grande City	230	29.68	−.05	29.83	30.01	4	29.65	14	0.35	84.0	−1.4	106.3	19	97.3	70.0	8	75.4	36.3	29.0	19	4.6	11	70.4	71.3	2.08	+0.88	3,853	se.	18	se.	29	9	5	17	8
Ohio Val. & Tenn.																																			
Chattanooga	783	29.14	−.03	29.97	30.14	26	29.81	17	0.32	71.8	−3.3	89.8	12	80.7	58.9	22	65.4	30.9	25.1	26	6.6	4	79.5	64.3	7.84	+3.29	3,428	sw.	22	n.	21	8	15	11	4
Knoxville	980	28.08	−.04	29.97	30.11	26	29.76	22	0.35	71.5	−1.9	91.2	12	80.3	55.0	19	63.8	36.2	27.2	12	9.4	14	82.8	65.5	4.62	+0.25	3,195	sw.	24	ne.	22	17	14	12	4
Memphis	320	29.62	−.01	29.92	30.13	3	29.73	16	0.39	75.1	−3.1	93.0	1	84.2	63.4	4	68.6	29.6	21.9	2	8.9	3	75.5	66.0	8.06	+2.99	3,866	nw.	28	sw.	2	15	11	14	5
Nashville	549	29.39	−.04	29.93	30.10	3	29.76	16	0.34	72.3	−4.6	91.1	12	81.5	55.6	5	64.8	35.5	25.1	12	8.2	14	78.3	64.3	7.69	+3.52	3,327	nw.	29	nw.	1	16	11	14	5
Louisville	551	29.40	−.01	29.96	30.17	4	29.75	16	0.42	71.4	−3.3	89.3	13	81.2	52.1	5	63.5	37.2	27.3	5	7.9	27	76.1	62.7	5.35	+0.95	4,169	n.	24	s.	13	15	13	11	6
Greencastle	897	29.04		29.94	30.19	3	29.69	16	0.50	68.5		84.5	16	76.9	48.1	4	61.1	36.4	23.7	7	6.7	27	73.6	59.0	3.59		3,227	se.	15	n.	16	11	2	16	12
Indianapolis	766	29.17	−.05	29.95	30.20	3	29.68	16	0.52	69.2	−3.2	89.0	16	78.8	46.9	4	59.6	42.1	27.4	5	8.9	13	69.4	57.5	4.92	−0.55	3,151	s.	18	nw.	17	13	8	13	9
Cincinnati	628	29.32	−.01	29.96	30.18	4	29.70	17	0.48	69.7	−4.2	85.5	12	78.5	50.7	4	62.3	34.8	26.3	6	4.6	27	73.1	59.8	5.26	+0.52	4,158	se.	28	n.	25	14	6	17	7
Columbus	805	29.12	−.02	29.95	30.16	4	29.67	17	0.49	67.6	−3.1	87.1	16	77.4	44.3	4	57.2	42.8	29.0	1	8.5	27	78.3	60.2	2.69	−1.30	3,682	se.	22	w.	17	14	7	12	11
Pittsburg	766	29.16	−.02	29.95	30.18	4	29.60	17	0.58	67.9	−3.0	92.5	13	79.2	†45.2	4	†58.2	47.†	33.1	13	†7.8	22	75.1	59.0	5.17	+1.66	3,521	nw.	28	sw.	2	12	5	16	9
Lower lake region.																																			
Buffalo	690	29.23	.00	29.95	30.20	19	29.52	17	0.67	63.7	−0.8	84.6	15	70.8	46.2	19	55.8	38.4	28.8	1	5.6	26	74.6	54.8	3.39	+0.02	5,824	sw.	32	sw.	26	10	8	10	12
Oswego	335	29.59	−.01	29.94	30.22	20	29.46	17	0.76	61.3	−2.9	80.9	15	69.6	43.1	4	52.8	37.8	27.3	7	7.9	23	70.5	51.0	1.03	−2.35	6,251	w.	26	se.	23	10	8	11	11
Rochester	621	29.30	−.01	29.95	30.21	20	29.48	17	0.73	63.8	−2.0	88.7	15	75.0	42.4	4	53.8	46.3	32.6	5	11.4	23	75.2	55.3	2.33	−0.99	6,165	sw.	32	nw.	7	10	8	14	8
Erie	681	29.24	−.01	29.95	30.20	8	29.56	17	0.64	64.1	−3.2	88.0	15	72.6	44.6	8	54.1	43.4	31.6	13	8.6	10	69.1	53.1	2.77	−1.40	5,377	w.	24	w.	25	12	5	11	14
Cleveland	690	29.23	−.02	29.95	30.20	8	29.58	17	0.62	65.5	−2.0	90.2	15	73.6	44.2	4	56.5	46.0	29.7	12	6.7	10	75.4	57.0	1.01	−3.44	4,847	n.	22	nw.	17	8	6	11	13
Sandusky	639	29.31	.00	29.97	30.21	8	29.64	17	0.58	66.3	−1.5	87.5	13	74.6	46.4	4	59.3	41.1	25.1	4	6.5	30	71.9	56.3	2.16	−2.74	7,029	e.	35	n.	17	11	6	12	12
Toledo	651	29.29	+.02	29.96	30.20	8	29.63	17	0.58	66.6		91.0	15	76.5	44.6	4	57.0	46.4	28.5	29	9.3	21	67.0	54.4	2.69	−0.99	4,800	w.	26	nw.	17	7	4	17	9
Detroit	661	29.26	.00	29.95	30.22	8	29.60	17	0.62	66.8	−0.5	89.2	15	75.9	49.0	8	58.6	40.2	24.8	28	6.0	21	76.4	58.8	2.07	−1.70	5,603	n.	26	nw.	17	12	4	15	11
Upper lake region.																																			
Alpena	609	29.29	.00	29.94	30.25	30	29.54	17	0.70	58.5	−0.9	84.3	13	68.8	*41.1	18	*50.7	43.*	32.2	9	7.4	12	80.1	51.6	4.02	+0.16	5,713	se.	32	nw.	17	13	3	20	7
Escanaba	608	29.29	+.03	29.94	30.22	30	29.63	16	0.59	60.0	−0.6	86.3	29	71.3	37.8	6	50.8	48.5	35.8	28	10.8	25	71.5	50.1	2.21	−2.39	4,875	s.	24	n.	6	14	10	12	8
Grand Haven	620	29.30	.00	29.94	30.22	3	29.64	16	0.58	61.0	−3.3	80.0	12	69.8	44.2	8	53.6	35.8	27.9	3	9.7	24	74.8	52.4	2.31	−2.30	5,859	nw.	25	s.	2	5	1	13	16
Mackinaw City	605	29.28	−.05	29.93	30.23	30	29.56	17	0.67	58.2	−0.6	81.6	13	67.7	39.3	8	49.2	42.3	34.5	4	5.0	23	74.8	49.6	2.12	−0.46	5,062	w.	28	sw.	4	10	3	17	10
Marquette	672	29.23	+.01	29.95	30.22	30	29.68	16	0.54	56.2	−2.6	87.2	13	67.2	39.0	7	47.1	48.2	36.5	8	10.1	10	73.1	46.8	3.79	−0.29	5,131	nw.	26	nw.	2	14	6	17	7
Port Huron	633	29.29	+.01	29.96	30.22	8	29.57	17	0.66	61.7	−1.2	86.2	15	70.5	42.2	8	53.0	44.0	31.5	2	6.8	30	76.1	53.6	1.02	−2.99	5,325	ne.	26	n.	17	12	6	11	13
Chicago	661	29.27	+.02	29.96	30.24	3	29.70	17	0.54	66.0	+0.5	87.3	15	73.7	49.0	7	58.7	38.3	22.9	4	6.3	27	72.7	56.5	0.94	−3.40	4,932	ne.	20	nw.	7	8	2	18	10
Milwaukee	697	29.23	+.02	29.96	30.22	3	29.67	16	0.55	61.5	−1.4	86.0	9	71.6	42.4	8	53.4	43.6	33.8	9	11.2	23	74.8	52.9	2.54	−1.69	5,645	e.	32	ne.	15	8	2	15	13
Duluth	672	29.23	+.01	29.95	30.23	28	29.70	13	0.53	57.6	−0.7	87.5	29	69.0	38.9	8	49.0	48.6	40.4	13	4.8	11	72.6	47.3	5.35	+0.02	3,940	ne.	28	ne.	27	20	5	15	10
Extreme northwest.																																			
Moorhead	923																																		
Saint Vincent	804	29.10	+.04	29.96	30.24	28	29.57	11	0.67	62.5	+1.0	87.2	30	76.0	30.0	5	47.3	57.2	44.5	5	11.6	1	82.1	56.8	2.15	−0.53	5,169	n.	28	s.	30	9	8	12	10
Bismarck	1,694	28.17	+.03	29.93	30.25	2	29.53	11	0.72	65.3	+1.7	92.0	30	78.2	40.6	2	53.2	51.4	35.9	5	10.8	14	61.4	49.8	2.03	−1.50	4,893	n.	28	ne.	14	11	3	20	7
Fort Buford	1,930	27.93	+.06	29.93	30.32	2	29.69	10	0.63	65.9	+2.2	93.7	30	79.5	36.2	2	52.9	57.5	37.8	3	10.8	13	53.2	45.2	0.93	−2.23	5,836	se.	36	w.	9	7	9	17	4
Fort Totten	1,487	28.37		29.93	30.19	2	29.61	11	0.58	61.7		88.2	30	73.1	33.0	2	49.7	55.2	38.2	5	11.0	1	72.9	51.9	2.79		7,461	n.	40	e.	14	15	5	15	10
Fort Yates										67.4		94.0	30	80.9	41.3	2	53.9	52.7							2.05	−0.31					11				

Table of miscellaneous meteorological data for June, 1886—Signal Service observations—Continued.

Stations.	Elevation above sea-level.	Atmospheric pressure (in inches and hundredths). Mean actual barometer.	Departure from normal.	Mean reduced barometer.	Extremes. Highest barometer	Date.	Lowest barometer	Date.	Monthly range of barometer.	Temperature of the air (in degrees Fahrenheit). Monthly mean.	Departure from normal.	Extremes. Max.	Date.	Mean max.	Min.	Date.	Mean min.	Daily ranges. Monthly range.	Greatest.	Date.	Least.	Date.	Mean rel. humidity.	Mean dew-point.	Precipitation.	Departure from normal.	Winds. Total movement.	Prevailing direction.	Maximum velocity. Miles p. h.	Direction.	Date.	No. of rainy days.	No. of cloudy days.	No. of fair days.	No. of clear days.
Upper Miss. Valley.																																			
Saint Paul	831	29.06	+.03	29.93	30.21	29	29.64	12	0.57	65.9	— 1.3	90.6	11	76.9	42.8	3	56.3	47.8	29.0	30	9.3	27	73.1	56.1	3.63	— 1.30	4,261	nw.	37	nw.	21	12	3	16	11
La Crosse	725	29.18	+.02	29.92	30.21	3	29.65	14	0.56	69.1	+ 0.4	94.0	14	78.4	47.3	3	60.1	46.7	24.5	21	11.6	2	74.1	60.1	1.89	— 2.85	5,201	s.	28	nw.	15	10	4	16	10
Davenport	615																																		
Des Moines	849	29.08	+.04	29.96	30.32	3	29.67	14	0.65	71.3	+ 1.8	101.4	14	85.2	44.3	3	60.6	56.8	34.1	30	14.6	2	68.7	59.5	1.21	— 0.70	3,273	n.	24	sw.	14	5	7	17	6
Dubuque	665																																		
Keokuk	618	29.30	+.02	29.93	30.28	3	29.68	15	0.60	70.6	— 1.6	88.6	12	81.9	46.1	3	60.5	42.7	28.8	11	12.4	26	70.5	59.7	2.86	— 2.75	4,540	n.	27	s.	12	5	3	11	16
Cairo	359	29.59	—.03	29.94	30.18	3	29.75	16	0.44	71.9	— 3.5	88.4	12	79.4	55.5	4	65.5	32.9	20.0	12	7.1	16	76.5	63.2	4.87	+ 0.34	4,313	n.	28	s.	1	17	15	9	6
Springfield	644	29.28	—.01	29.92	30.25	3	29.67	16	0.57	71.4	0.0	88.1	12	81.0	49.5	3	61.6	38.6	27.1	12	11.0	26	67.7	59.6	3.83	— 2.06	4,165	s.	24	nw.	17	11	5	12	13
Saint Louis	571	29.36	—.01	29.94	30.25	3	29.69	16	0.56	74.2	— 0.3	90.8	16	82.3	57.0	3	67.1	33.8	24.9	18	6.6	26	71.1	63.4	7.09	+ 2.10	6,648	se.	38	se.	10	14	4	15	11
Missouri Valley.																																			
Lamar	1,028	28.92	.....	29.90	30.26	3	29.72	15	0.54	70.7	.....	89.4	15	81.2	49.7	4	62.0	39.7	30.1	4	7.4	19	70.1	59.3	4.73	.....	5,468	ne.	26	ne.	15	8	7	13	10
Leavenworth	842	29.08	+.02	29.93	30.30	3	29.66	14	0.65	71.2	— 2.6	92.0	1	83.1	54.2	4	61.9	37.8	26.0	21	10.6	25	74.7	62.0	4.93	— 0.60	3,509	n.	28	s.	12	13	4	16	10
Omaha	1,113	28.84	+.06	29.97	30.34	3	29.64	14	0.70	70.2	— 1.4	92.4	14	82.1	47.1	3	60.5	45.3	29.6	10	10.0	15	69.1	58.6	1.50	+ 4.90	3,904	s.	32	se.	14	9	2	16	12
Valentine	2,603	27.32	.....	29.89	30.23	3	29.52	11	0.70	65.1	.....	93.1	11	70.7	43.3	3	54.9	48.0	31.2	17	7.6	1	61.7	49.8	2.25	.....	7,211	nw.	38	s.	30	13	8	14	8
Huron	1,307	28.58	+.03	29.92	30.26	3	29.50	12	0.77	65.3	— 0.8	90.4	11	73.9	39.1	3	52.1	51.3	37.3	4	16.7	14	77.6	57.1	1.90	— 2.80	5,074	nw.	30	nw.	11	11	5	10	15
Yankton	1,234	28.66	+.05	29.94	30.31	3	29.51	12	0.80	67.8	— 0.7	90.5	14	80.2	44.2	3	57.2	46.3	32.5	9	12.5	1	73.7	58.0	3.07	— 1.87	4,799	n.	30	s.	19	7	3	15	12
Northern slope.																																			
Fort Assiniboine	2,720	27.14	+.05	29.95	30.36	2	29.70	30	0.66	65.4	+ 1.9	94.9	27	80.7	38.7	2	52.4	56.2	41.2	3	14.9	1	51.1	45.2	1.38	— 0.80	7,184	w.	45	s.	30	8	5	19	6
Fort Benton	2,681	27.19	.....	29.96	30.33	1	29.75	30	0.58	65.8	+ 3.6	95.7	22	82.3	38.0	3	52.1	57.7	47.1	3	9.8	13	47.6	42.8	1.53	— 0.70	2,752	w.	28	w.	29	14	9	13	8
Fort Custer	3,040	26.83	+.07	29.89	30.22	2	29.61	30	0.58	65.3	+ 1.3	95.0	30	82.1	41.8	2	51.5	53.2	43.6	29	12.9	13	56.5	46.6	2.90	+ 0.11	4,413	ne.	44	n.	6	9	5	20	5
Fort Maginnis	4,340	25.58	.....	29.91	30.22	2	29.69	30	0.54	59.8	+ 1.5	89.2	29	74.1	35.7	2	49.3	53.5	36.5	3	7.7	13	60.2	44.9	2.55	+ 0.36	5,799	n.	28	w.	19	15	9	18	3
Fort Shaw	3,550	26.36	.....	29.94	30.29	2	29.77	30	0.52	61.2	+ 1.5	89.9	23	79.3	35.4	2	47.7	54.5	48.5	4	14.0	13	66.4	48.7	1.64	— 0.69	3,151	w.	36	w.	17	16	5	17	8
Helena	4,069	25.85	+.05	29.92	30.21	2	29.75	30	0.46	61.1	+ 0.7	88.3	27	74.4	40.0	14	49.2	48.3	39.1	3	13.5	13	52.3	41.6	1.14	— 1.47	5,825	nw.	40	nw.	27	12	5	16	9
Poplar River	2,030	27.82	.....	29.93	30.35	2	29.71	10	0.67	67.1	.....	97.5	30	82.3	32.8	2	51.5	64.7	43.3	3	15.5	13	61.0	51.0	0.80	— 1.04	5,665	w.	29	nw.	10	5	4	19	7
Deadwood	4,600	25.43	+.06	29.87	30.15	2	29.61	11	0.54	59.6	— 0.5	82.6	29	69.7	39.6	3	50.2	42.4	31.2	9	7.1	12	64.1	46.6	2.00	— 2.20	1,839	nw.	17	ne.	11	13	2	10	18
Cheyenne	6,105	24.06	.00	29.80	30.03	2	29.50	12	0.53	59.3	— 1.9	86.8	10	75.3	39.9	3	46.2	48.9	38.9	17	14.0	2	62.3	45.2	1.52	+ 0.01	5,780	s.	29	nw.	18	10	5	15	10
North Platte	2,841	27.08	+.05	29.86	30.22	3	29.50	12	0.72	67.6	— 0.5	90.0	11	79.0	50.3	17	57.7	39.7	30.7	5	6.4	3	68.7	55.7	1.14	— 2.59	6,360	s.	30	se.	12	8	2	17	11
Middle slope.																																			
Denver	5,294	24.79	+.06	29.82	30.08	2	29.45	12	0.64	65.3	— 1.3	92.7	30	78.8	46.8	3	52.7	45.9	35.1	30	8.6	2	54.9	45.9	2.26	+ 0.40	4,990	n.	40	nw.	18	11	3	19	8
Pike's Peak	14,134	18.02	.....	29.83	29.98	29	29.57	12	0.41	33.0	+ 0.6	52.1	28	39.7	24.0	2	28.4	28.1	20.1	28	4.7	2	82.6	28.2	2.44	+ 0.65	10,062	nw.	64	sw.	12	19	0	19	11
West Las Animas	3,899	26.68	+.06	29.83	30.10	3	29.44	12	0.56	69.6	+ 0.4	98.0	13	85.9	48.3	6	56.2	49.7	40.5	10	8.2	2	64.1	54.8	1.19	— 1.33	5,821	e.	40	nw.	25	4	2	17	11
Concordia	1,384	28.51	.....	29.91	30.30	3	29.58	14	0.73	69.9	.....	96.0	14	82.6	46.2	3	60.2	49.8	34.4	10	10.5	20	73.3	59.8	3.20	.....	5,388	s.	30	nw.	14	10	0	19	11
Dodge City	2,517	27.41	+.07	29.88	30.24	3	29.55	14	0.69	71.2	— 1.6	95.2	14	83.6	47.2	3	60.4	48.0	34.3	4	10.2	15	74.9	62.0	5.47	+ 2.50	7,740	s.	44	e.	19	10	4	14	12
Fort Reno	.....	.....	.....	.....	.....	.....	.....	.....	.....	74.4	.....	101.1	1	86.2	49.0	4	62.5	52.1	.....	.....	.....	.....	.....	.....	3.13	— 4.33	.....	.....	.....	.....	.....	6	.....	.....	.....
Fort Supply	.....	.....	.....	.....	.....	.....	.....	.....	.....	76.0	.....	96.4	14	86.1	51.4	3	65.8	45.0	.....	.....	.....	.....	.....	.....	4.50	+ 0.23	.....	.....	.....	.....	.....	12	.....	.....	.....
Fort Elliott	2,650	27.23	+ 09	29.88	30.18	3	29.65	14	0.53	72.2	— 0.8	95.5	1	84.0	48.7	4	61.9	40.8	30.2	4	14.6	2	65.3	58.4	3.45	— 0.03	7,784	se.	46	ne.	21	9	4	13	13
Southern slope.																																			
Fort Sill	1,200	28.71	+.01	29.88	30.13	3	29.67	16	0.46	70.6	— 0.6	103.0	1	88.5	51.7	4	66.5	51.3	33.8	25	7.0	12	62.9	61.4	1.08	— 4.33	8,479	n.	37	se.	19	6	2	11	17
Abilene	1,745	28.15	.....	29.90	30.15	...	29.64	15	0.52	78.9	.....	108.7	16	91.3	56.5	4	68.4	52.2	34.5	18	14.5	3	57.6	60.3	3.38	.....	5,676	n.	36	sw.	18	5	2	13	15
Fort Davis	4,928	25.19	—.01	29.76	29.92	3	29.60	12	0.32	73.6	— 1.3	99.5	19	88.9	49.5	8	60.6	50.0	33.6	30	18.5	7	45.7	47.4	2.18	— 0.07	4,828	ne.	56	ne.	23	9	3	12	15
Fort Stockton‡	3,004	26.92	—.01	29.80	30.05	3	29.63	12	0.42	77.4	.....	107.5	18	93.2	54.7	4	64.5	42.8	38.0	16	10.2	3	56.0	56.8	1.47	.....	4,125	se.	32	nw.	2	5	2	8	10
Fort Stanton	.....	24.01	.....	.....	.....	.....	.....	.....	0.38	63.4	.....	90.9	16	80.3	42.1	5	50.2	48.8	43.7	18	9.8	3	53.0	43.5	1.61	.....	4,074	w.	27	ne.	23	11	2	9	19
Southern plateau.																																			
El Paso	3,764	26 21	+.01	29.77	30.00	3	29.54	12	0.47	78.9	— 1.7	108.3	18	99.3	54.9	4	65.9	54.9	49.6	18	21.0	7	41.6	50.0	1.03	+ 0.56	2,492	e.	29	e.	23	6	1	9	20
Lava	.....	.....	.....	.....	.....	.....	.....	.....	.....	77.4	.....	105.0	18	95.9	48.9	5	58.8	56.0	.....	.....	.....	.....	.....	.....	0.29	.....	.....	.....	.....	.....	.....	3	.....	.....	.....
Santa Fé	7,026	23.34	+.05	29.84	30.01	3	29.60	12	0.41	63.0	— 1.5	85.9	18	77.0	43.8	6	52.5	42.1	31.5	18	16.6	5	43.4	38.1	0.95	— 0.23	4,589	sw.	31	n.	23	5	0	10	20
Fort Apache	5,050	25.04	+.03	29.77	29.94	30	29.56	11	0.34	69.1	+ 2.5	100.6	30	92.9	40.0	3	47.1	60.6	55.9	17	34.2	13	32.3	36.0	0.19	— 0.80	5,548	ne.	29	se.	4	3	1	5	24
Fort Bowie	.....	.....	.....	.....	.....	.....	.....	.....	.....	78.6	.....	104.0	20	92.6	55.0	4	64.7	49.0	.....	.....	.....	.....	.....	.....	0.21	.....	.....	.....	.....	.....	.....	2	.....	.....	.....
Fort Grant	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fort McDowell	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fort Thomas	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fort Verde	.....	.....	.....	.....	.....	.....	.....	.....	.....	75.0	— 3.2	103.5	28	95.7	47.0	3	54.4	56.5	.....	.....	.....	.....	.....	.....	0.01	— 0.27	.....	.....	.....	.....	.....	1	.....	.....	.....
Maricopa	.....	.....	.....	.....	.....	.....	.....	.....	.....	87.2	.....	113.7	20	100.6	59.4	1	67.7	54.3	.....	.....	.....	.....	.....	.....	0.00	.....	.....	.....	.....	.....	.....	0	.....	.....	.....
Phœnix	.....	.....	.....	.....	.....	.....	.....	.....	.....	80.4	— 4.8	113.3	20	106.9	45.3	1	53.9	68.0	.....	.....	.....	.....	.....	.....	0.00	— 0.12	.....	.....	.....	.....	.....	0	.....	.....	.....
Prescott	5,389	24 73	+.01	29.77	29.90	29	29.53	11	0.37	67.4	+ 1.1	93.1	20	85.9	42.0	1	49.6	51.1	44.9	19	23.8	13	37.7	37.9	0.00	— 0.16	4,971	sw.	29	sw.	12	0	0	4	26
San Carlos	.....	.....	.....	.....	.....	.....	.....	.....	.....	82.8	.....	109.0	21	103.0	53.4	19	62.5	55.6	.....	.....	.....	.....	.....	.....	0.00	.....	.....	.....	.....	.....	.....	0	.....	.....	.....
Willcox	.....	.....	.....	.....	.....	.....	.....	.....	.....	75.6	.....	105.5	20	99.7	48.0	4	51.6	57.5	.....	.....	.....	.....	.....	.....	trace	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Yuma	141	29.62	—.02	29.74	29.93	4	29.45	11	0.48	84.0	— 1.7	109.5	10	102.1	64.1	6	69.5	45.4	39.8	18	21.5	12	49.6	60.3	0.00	— 0.01	4,417	sw.	24	s.	12	0	0	0	30
Middle plateau.																																			
Fort Bidwell	.....	25.38	.....	.....	.....	.....	.....	.....	0.39	61.2	.....	86.0	22	75.0	32.8	12	47.0	53.2	36.5	8	18.4	10	38.2	33.3	0.78	.....	3,962	w.	20	w.	5	6	4	7	19
Winnemucca	4,358	25.60	+.06	29.85	30.03	19	29.66	12	0.37	64.2	+ 0.8	94.0	22	80.7	35.3	13	47.9	59.6	42.7	29	15.8	12	32.6	30.1	0.76	— 0.24	5,761	sw.	31	e.	1	2	1	7	22
Salt Lake City	4,348	25.60	+.02	29.81	29.96	16	29.37	12	0.59	68.5	+ 1.1	95.2	23	81.3	42.2	13	56.4	53.0	34.2	9	13.9	2	81.7	62.5	1.02	+ 0.18	4,146	nw.	28	nw.	12	4	0	13	17
Montrose	5,825	24.30	.....	29.80	29.94	4	29.51	11	0.43	66.8	.....	89.5	29	83.7	41.8	1	51.8	47.7	40.7	17	24.1	13	34.7	33.6	0.01	.....	5,981	se.	30	w.	2	1	0	11	19
Fort Bridger	.....	23.56	.....	.....	.....	.....	.....	.....	0.52	54.6	.....	80.4	29	70.9	29.2	14	39.9	51.2	38.8	17	21.2	11	62.0	40.3	1.16	.....	5,214	sw.	36	w.	13	10	3	15	12
Northern plateau.																																			
Boisé City	2,750	27.12	.....	29.90	30.10	19	29.71	26	0.38	66.9	+ 0.9	95.8	22	81.7	39.5	14	51.6	56.3	41.1	21	12.4	13	47.9	43.5	0.44	— 0.52	3,302	nw.	21	nw.	5	4	1	9	20
Cœur d'Alene	.....	.....	.....	.....	.....	.....	.....	.....	.....	61.1	.....	88.0	3	75.6	39.0	12	40.6	49.0	.....	.....	.....	.....	.....	.....	0.98	— 0.07	.....	.....	.....	.....	.....	4	.....	.....	.....
Ashland	.....	.....	.....	.....	.....	.....	.....	.....	.....	64.8	.....	94.0	2	80.7	41.0	18	48.9	54.0	.....	.....	.....	.....	.....	.....	0.72	.....	.....	.....	.....	.....	.....	3	.....	.....	.....
Fort Klamath	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lakeview	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Linkville	.....	.....	.....	.....	.....	.....	.....	.....	.....	60.8	.....	89.1	4	75.5	37.6	10	46.2	51.5	.....	.....	.....	.....	.....	.....	1.19	.....	.....	.....	.....	.....	.....	6	.....	.....	.....
Fort Spokane	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Spokane Falls	1,909	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Walla Walla	.....	28.90	.....	.....	.....	.....	.....	.....	0.41	68.0	.....	93.0	4	81.3	43.6	13	56.8	49.4	34.9	2	12.5	10	42.0	41.5	0.73	.....	4,853	sw.	24	sw.	10	10	9	11	10
N. Pac. coast region.																																			
Fort Canby	179	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Neah Bay	.....	.....	.....	.....	.....	.....	.....	.....	.....	56.4	.....	72.5	13	65.8	38.0	12	47.0	34.5	.....	.....	.....	.....	.....	.....	3.70	.....	.....	.....	.....	.....	.....	11	.....	.....	.....
Olympia	36	30.00	+.02	30.04	30.24	11	29.81	15	0.43	59.9	+ 1.1	91.9	2	72.6	36.2	12	47.7	55.7	43.6	2	12.1	6	73.2	50.2	1.26	+ 0.10	3,014	s.	16	ne.	11	10	10	10	10
Port Angeles	14	30.02	.....	30.04	30.21	11	29.83	15	0.38	53.8	.....	81.3	13	62.3	38.6	12	46.5	42.7	38.2	13	8.4	16	81.8	48.0	0.70	.....	3,957	w.	22	w.	5	8	9	14	7
Pysht	.....	.....	.....	.....	.....	.....	.....	.....	.....	56.7	.....	77.0	13	66.9	38.0	12	46.5	39.0	.....	.....	.....	.....	.....	.....	2.33	.....	.....	.....	.....	.....	.....	9	.....	.....	.....
Tatoosh Island	86	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Astoria	.....	.....	.....	.....	.....	.....	.....	.....	.....	57.8	.....	69.0	20	63.7	47.0	28	51.9	22.0	.....	.....	.....	.....	.....	.....	2.05	.....	.....	.....	.....	.....	.....	16	.....	.....	.....
Portland	80	29.95	+.02	30.04	30.26	11	29.78	15	0.47	62.9	+ 1.1	95.0	2	75.5	46.5	12	53.5	48.5	35.3	2	9.8	9	67.4	50.7	0.67	— 1.12	3,548	nw.	22	s.	14	7	10	11	9
Roseburg	523	29.51	+.03	30.06	30.26	11	29.86	15	0.40	61.5	+ 0.3	86.8	21	75.9	44.3	13	48.3	42.5	38.6	1	14.9	30	62.5	47.1	0.13	— 0.95	1,699	nw.	13	nw.	11	2	4	12	14
Mid. Pac. coast reg.																																			
Cape Mendocino	637	29.37	+.03	30.04	30.20	19	29.89	2	0.32	54.0	— 0.3	65.9	26	59.6	47.0	12	49.9	18.9	14.2	8	6.5	15	81.8	48.5	0.04	— 0.71	16,427	n.	52	n.	7	0	4	17	9
Red Bluff	342	29.53	—.02	29.87	30.08	19	29.72	24	0.36	79.1	+ 3.3	102.7	21	92.1	55.8	13	64.6	46.9	34.5	2	20.8	12	35.4	47.0	trace	— 0.42	5,671	n.	28	n.	12	0	0	4	26
Sacramento	64	29.82	—.03	29.87	30.06	19	29.66	11	0.41	69.0	+ 0.3	97.7	8	85.3	51.5	29	57.0	46.2	35.8	19	15.0	12	60.4	53.5	0.00	— 0.29	5,837	n.	42	nw.	12	0	0	0	30
San Francisco	60	29.90	—.02	29.95	30.14	30	29.74	11	0.40	57.9	— 0.5	82.8	6	67.8	48.3	6	51.1	34.5	27.6	8	8.4	4	72.4	48.9	0.01	— 0.31	9,366	w.	34	w.	18	0	2	10	18
S. Pac. coast region.																																			
Los Angeles	339	29.56	.00	29.91	30.04	4	29.72	11	0.32	66.1	+ 0.7	91.6	18	80.9	48.2	1	56.8	43.4	39.4	19	9.6	12	75.9	57.2	0.11	— 0.08	3,786	w.	17	w.	13	1	3	16	10
San Diego	67	29.85	—.02	29.89	30.01	4	29.74	41	0.27	63.1	— 1.3	74.8	19	69.5	54.3	18	58.6	20.5	20.2	19	6.2	6	80.6	56.8	0.06	— 0.01	4,534	sw.	24	sw.	11	1	12	15	3
San Luis Obispo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

* Record for 29 days. † Record for 28 days. ‡ Record for 20 days.

Americus, Sumter county, Georgia: on the night of the 29–30th a severe wind and rain storm passed over this place; trees and fences were blown down and corn broken off; much damage was done to mill property and county roads.

Savannah, Georgia, 30th: the continued heavy rains of the last days of the month have seriously injured the crops in Clarke county. The streams of Oglethorpe county were higher than has been known in years. In Sumter county the corn crop was much injured by wind, it being estimated that one-half was broken off. Bottom lands were overflowed, and crops completely destroyed.

Eastman, Dodge county, Georgia: the heavy rain of the 30th did much damage in this county. Bridges and grist mills on water courses were washed away, and crops greatly injured.

Sofkee, Decatur county Georgia: on the 30th this section was visited by a destructive rain and wind storm. Rain began falling early in the morning and continued during the day, it was especially heavy from 3 to 5 p. m., when it was accompanied by a severe northeast gale. All mills using water as a motor were partly destroyed, fences were blown down or crushed by falling timber, and bridges were carried away by the freshet. The roads were badly washed and blocked with trees and debris. The storm was especially severe on growing crops; cotton and corn were beaten to the ground and submerged in mud; peach and pear trees were blown down by thousands and much ripe fruit destroyed.

Grand Coteau, Saint Landry parish, Louisiana, 30th: during the month the amount of rainfall was about double the average for June, and considerable damage to crops was done by the overflow of streams.

Spartanburg, Spartanburg county, South Carolina, 30th: the month has been very rainy, causing floods in the lowlands and injury to crops.

STAGE OF WATER IN RIVERS.

In the following table are shown the danger-points at the various river stations; the highest and lowest depths for June, 1886, with the dates of occurrence, and the monthly ranges:

Heights of rivers above low-water mark, June, 1886.

[*Expressed in feet and tenths.*]

Stations.	Danger-point on gauge.	Highest water.		Lowest water.		Monthly range.
		Date.	Height.	Date.	Height.	
Red River:						
Shreveport, Louisiana	29.9	1	4.8	14	1.8	3.0
Arkansas River:						
Fort Smith, Arkansas	22.0	26	6.6	6	2.6	4.0
Little Rock, Arkansas	23.0	16	8.9	10, 11	2.8	6.1
Missouri River:						
Yankton, Dakota	24.0	21	22.9	1	16.6	6.3
Omaha, Nebraska	18.0	11, 12	12.9	30	10.1	2.8
Leavenworth, Kansas	20.0	21, 24	14.3	1	9.3	5.0
Mississippi River:						
Saint Paul, Minnesota	14.5	20	6.3	11, 12	3.3	3.0
La Crosse, Wisconsin	24.0	27, 28	6.5	15, 16	4.9	1.6
Dubuque, Iowa	16.0					
Davenport, Iowa	15.0					
Keokuk, Iowa	14.0	1	7.8	22 to 25	3.9	3.9
Saint Louis, Missouri	32.0	28	20.6	8, 9	15.0	5.6
Cairo, Illinois	40.0	30	29.6	10, 11	20.3	9.3
Memphis, Tennessee	34.0	1	24.2	12, 13	16.6	7.6
Vicksburg, Mississippi	41.0	1	41.9	19	25.4	16.5
New Orleans, Louisiana	13.0	2 to 8	14.4	19	11.8	2.6
Ohio River:						
Pittsburg, Pennsylvania	22.0	18	11.3	2, 3, 4	2.0	9.3
Cincinnati, Ohio	50.0	30	25.0	11	9.5	15.5
Louisville, Kentucky	25.0	30	10.3	14	5.7	4.6
Cumberland River:						
Nashville, Tennessee	40.0	27	23.0	1, 2	5.1	17.9
Tennessee River:						
Chattanooga, Tennessee	33.0	23	16.0	30	7.2	8.8
Monongahela River:						
Pittsburg, Pennsylvania	29.0	18	11.3	2, 3, 4	2.0	9.3
Savannah River:						
Augusta, Georgia	32.0	8, 9	19.4	4, 5	8.9	10.5
Mobile River:						
Mobile, Alabama		15	8.8	2, 3	17.3	1.5
Sacramento River:						
Red Bluff, California		1, 5	3.2	22 to 30	2.4	0.8
Sacramento, California		1, 2	20.8	30	13.9	6.9
Willamette River:						
Portland, Oregon		9, 10	20.0	30	14.0	6.0
Colorado River:						
Yuma, Arizona		6, 7	26.7	30	20.0	6.7

HIGH TIDES.

Chincoteague, Virginia, 15th.
Cedar Keys, Florida, 21st.
Manatee, Florida, 29th.

ATMOSPHERIC ELECTRICITY.

AURORAS.

Tatoosh Island, Washington Territory: an aurora was observed at 8.40 p. m. of the 1st, consisting of a pale straw-colored light, extending from 5° east to 26° west of the magnetic meridian.

Fort Buford, Dakota, 2d: an aurora began at 10.50 p. m., consisting of four streamers of a reddish hue, extending to about 50° altitude, and from 360° to 35° azimuth. The streamers appeared to be stationary, and were at their maximum intensity between 11 and 11.15 p. m., after which they gradually faded and disappeared at 11.35 p. m.

Saint Vincent, Minnesota: at 10 p. m. of the 4th an aurora was observed in the northern sky. It consisted of a horizontal band of straw-colored light extending from northwest to northeast and resting on a dark segment. The light was about 16° in altitude and presented an undulating appearance. The display was not active and remained as first observed until the early morning of the 5th, when it disappeared.

Harvard College, Cambridge, Massachusetts: on the 4th an auroral arch became visible as soon as the twilight had disappeared. The aurora became quite distinct at 9 p. m., streamers appearing at 9.15 p. m., some of which were very long and bright.

Duluth, Minnesota, 4th: a pale straw-colored auroral light was observed from 9.40 p. m. until about midnight. Average altitude of the aurora was 30°, azimuth, 150° to 250°.

Gardiner, Kennebec county, Maine: a faint aurora was seen at 9 p. m. of the 4th. It became brighter at 10 p. m., but was nearly obscured by clouds; at midnight a bright arch was seen with streamers nearly extending to the zenith.

Mount Washington, New Hampshire: at 9.20 p. m. of the 4th a faint auroral light was seen, extending from 50° west to 60° east of north. The aurora increased rapidly in brilliancy and extent; at 9.30 p. m. the arch extended from 70° west to 80° east of north, and to an altitude of 12°, at the same time brilliant white fleecy streamers rose rapidly from the arch. The maximum brilliancy occurred at 10.10 p. m., after which the light gradually faded and disappeared at 11.50 p. m.

Eastport, Maine: a brilliant auroral display was observed from 7.35 to 10.10 p. m. of the 4th. The arch was 45° in altitude and extended about 140° along the horizon; waves of white light shot up from the borders of the arch towards the zenith, making an illumination strong enough to cast a shadow. The aurora was at its maximum brilliancy at 9.30 p. m.

Washington City, District of Columbia: an aurora was seen at 9.53 p. m. of the 4th. It was first noticed as two bright areas of light in the north with a dark space between. The altitude was about 30° and the width 20° on either side of the north point of the horizon. The western portion had an appearance of streamers which gradually moved eastward across the dark space and finally coalesced with the eastern portion of the aurora. The display ceased at 9.59 p. m.

Boston, Massachusetts, 5th: An aurora was visible from 8.45 to 10.45 p. m. The beams were well-defined and were from one to two degrees in breadth; at times they became very bright, changing from a pale yellow to light red. Altitude of aurora, 25°; azimuth, 120° to 240°.

Fort Buford, Dakota: a white auroral light was observed from 12.58 until 2.10 a. m. of the 5th, extending to about 20° altitude and 45° azimuth. The light was irregular in form and at the period of maximum brilliancy a few streamers of reddish tinge were visible.

Marquette, Michigan: a pale auroral light was seen from 10.25 to 10.50 p. m. on the 5th. Streamers of various heights were observed, several extending to the zenith.